

ICOM

DUAL BAND ALL MODE TRANSCEIVER

IC-821H



Icom Inc.

DUAL BAND ALL MODE TRANSCEIVER IC-821H

Icom brings you the latest in dual band all mode technology. The IC-821H features compact size and easy operation—in fact, it's as compact as many single band transceivers. And while simple operation usually equates with limited functions, the IC-821H is easy to use and is loaded with enough functions and performance to satisfy even the most demanding of users—including digital satellite and CW operators.

Compact and lightweight

The IC-821H joins Icom's lineup of small, lightweight base stations—not only a great addition to your shack, but also a great choice for mobile or field operation. And small size doesn't mean small performance. This rig boasts superior performance and specifications such as high frequency stability of ± 3 ppm and 100% duty cycle operation.

241(W) x 94(H) x 239(D) mm; 5.0 kg
9.5(W) x 3.7(H) x 9.4(D) in; 11.0 lb

Flexible Main/Sub band operation

For V/U band operation, Main and Sub bands are available. But unlike many other transceivers, the Sub band is an "equal partner."

Independent volume/squelch controls provide simplified operation; the action of the RF attenuator and preamplifier can be selected for either both or only one of the bands; and, RIT and IF shift can be adjusted separately. In addition, scan functions on the Sub band can be activated independently from Main band operations.

The essential difference between the Main and Sub bands is that transmit is not possible on the Sub band during normal operation and the S-meter appears as a bar meter in the function display (not in the analog meter).

UPGRADE TO A



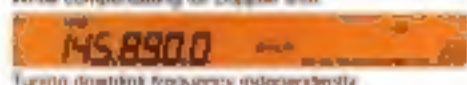
Great satellite communications

The IC-821's built-in satellite functions make satellite operation easier than ever. A separate VFO and 10 memory channels are provided specifically for satellite operation, making it simple to recall your most used frequencies.

In satellite mode, the Sub band is set to the transmitter (uplink) frequency and the Main band is set to the receiver (downlink) frequency. In this way, the analog S-meter, IF shift, noise blanker and RIT functions can be used for receiving. This is convenient for fine-tuning the transceiver's operation to your needs.

Also, CW (including CW narrow*) can be used with an electronic keyer in satellite mode. A Tx/Rx frequency tracking function with normal/reverse shift tracking is standard.

*An optional PL-131 CW narrow filter for the sub band is required.



Excellent support for CW

CW enthusiasts will not be disappointed with the IC-821H. An electronic keyer is built-in and optional CW-narrow filters are available separately for the Main and Sub bands. Advanced CW features include adjustable keying speed and dot/dash ratio, delay time for semi break-in operation is adjustable, the connected paddle operation can be reversed, and, the side-tone circuit is synchronized with the transceiver's volume.



9600 bps packet capability

For high speed packet operation a transceiver should have excellent C/N ratio and frequency stability as well as direct audio modulation. Packeters will be happy to know, the IC-821H meets all of these conditions and more. Additional packet features include selectable data rates of 1200 or 9600 bps, modulation signals from the AGC are adjustable for various input levels, a modulation limiter circuit, and direct connection to a packet modem via the AGC connector.



Spot function

The new spot function allows you to conveniently mark or store a DX station temporarily. When tuning across the memorized frequency, a beep sounds to alert you.

Other features

- Continuously adjustable TX output power
- IF shift for either main or sub band
- 160 memory channels (80 per band) for storage of freq. mode, repeater settings, etc.
- 4 types of scan which can be activated on each band independently
- AF speech compressor for increasing average talk power
- Auto repeater (U.S.A. and Australia only) and one-touch repeater functions
- RIT function built-in
- RF attenuator
- Noise blanker
- Tone encoder standard (except Europe version)
- FM center indicator
- Transmit indicator brightness level functions as an ALC meter
- Separate speaker jacks for each band
- Dual lock
- AGC time constant control
- Squelch monitor function
- Computer interface capability with Icom's C-V bus

N ALL MODE DUAL BANDER



SPECIFICATIONS

GENERAL

• Frequency coverage

Unit: MHz

| | VHF | UHF |
|-----------|----------------|---------------|
| U.S.A. | 144.00-148.00* | 430.00-450.00 |
| Europe | 144.00-148.00 | 430.00-440.00 |
| Australia | 144.00-148.00 | 430.00-450.00 |
| Sweden | 144.00-148.00 | 432.00-438.00 |

*Receive: 136.0-174.0 (Guaranteed: 144.0-148.0)

SSB, CW, FM

160 (80 channels for each band)

VHF: SO-239 (50 Ω) UHF: Type-N (50 Ω)

-10°C to +50°C (+14°F to +140°F)

13.8 V DC ±15% (negative ground)

Transmit: Max. power: 16.6 A

Receive: Standby: 2.0 A

Max. audio: 2.5 A

241(W) × 94(H) × 239(D) mm

8.5(W) × 3.7(H) × 9.4(D) in

5.0 kg (11.0 lb)

• Mode

• Number of memory channels

• Antenna connector

• Usable temperature range

• Power supply requirement

• Current drain (at 13.8 V DC)

• Dimensions

• (projections not included)

• Weight

TRANSMITTER

• Output power

(continuously adjustable)

| | | |
|-----|--------|--------|
| VHF | SSB | 6-35 W |
| | FM, CW | 6-45 W |
| UHF | SSB | 6-30 W |
| | FM, CW | 6-40 W |

• Modulation system

SSB: Balanced modulation

FM: Variable reactance modulation

• Spurious emissions

Less than -60 dB

• Carrier suppression

More than 40 dB

• Unwanted sideband suppression

More than 40 dB

• Microphone connector

8-pin connector (800 Ω)

RECEIVER

• Receive system

| | | |
|-----|---------|-----------------------------------|
| VHF | SSB, CW | Single conversion superheterodyne |
| | FM | Double conversion superheterodyne |
| UHF | SSB, CW | Double conversion superheterodyne |
| | FM | Triple conversion superheterodyne |

• Intermediate frequencies

Unit: MHz

| | Mode | 1st IF band | | | 2nd IF band | | |
|-----|------|-------------|---------|--------|-------------|---------|--------|
| | | 1st | 2nd | 3rd | 1st | 2nd | 3rd |
| VHF | SSB | 10.8500 | — | — | 10.8500 | — | — |
| | CW | 10.8491 | — | — | 10.8491 | — | — |
| | FM | 10.8500 | 0.4550 | — | 10.8500 | 0.4550 | — |
| UHF | SSB | 71.2500 | 10.8500 | — | 71.3500 | 10.8500 | — |
| | CW | 71.3491 | 10.8491 | — | 71.3491 | 10.8491 | — |
| | FM | 71.2500 | 10.8500 | 0.4550 | 71.3500 | 10.8500 | 0.4550 |

• Sensitivity (both VHF and UHF bands)

| | |
|---------|-------------------------|
| SSB, CW | 0.11 μV for 10 dB S/N |
| FM | 0.18 μV for 12 dB SINAD |

• Squelch sensitivity (both VHF and UHF bands)

| | |
|---------|--|
| SSB, CW | Threshold/Tight: Less than 1.0 μV/3.2 mV |
| FM | Threshold/Tight: Less than 0.1 μV/3.2 mV |

• Selectivity

| | | |
|---------|--------------------------|---------------------------|
| SSB, CW | More than 2.3 kHz/-6 dB | Less than 4.2 kHz/-60 dB |
| FM | More than 15.2 kHz/-6 dB | Less than 30.0 kHz/-60 dB |

• Spurious and image rejection ratio

More than 60 dB

• Audio output power (at 13.8 V DC)

More than 2.0 W at 10% distortion

• RF shift variable range

More than ±1.2 kHz

• RTT variable range

More than ±1.0 kHz

• External speaker connector

2-conductor 3.5 mm (1/8") R/L connector x 2 (for MAIN and SUB bands)

All stated specifications are subject to change without notice or obligation.

OPTIONS

Available options may vary between countries.

■ PREAMPLIFIERS

• AG-25/AG-35 WEATHERPROOF PREAMPLIFIERS

External all-weather, mast mounting preamplifier for compensating for coaxial cable loss.

AG-25: for VHF; AG-35: for UHF.

■ POWER SUPPLIES

• IC-PS30 DC POWER SUPPLY 13.8 V, 25 A

System power supply. Equipped with 1 DC power cable and 3 output connectors. Cannot be used with Europe or Sweden versions.

• PS-85 DC POWER SUPPLY 13.8 V, 20 A

Style and size are matched to the IC-821H.

■ INTERNAL UNITS AND FILTERS

• FL-132/FL-133 CW NARROW FILTERS

FL-132 is for the main band; FL-133 is for the sub band and satellite operation.

Center freq.: 10.8491 MHz (FL-132); 10.8491 MHz (FL-133)

Passband width: 500 Hz/-6 dB

• CR-295 HIGH STABILITY CRYSTAL UNIT

Frequency stability: ±0.5 ppm at 0°C to +50°C

• UT-84 TONE SQUELCH UNIT

Provides tone squelch and tone scan functions. One unit can be used for both bands simultaneously.

• UT-102 VOICE SYNTHESIZER UNIT

Provides audible confirmation of frequency and mode with a clear, electronically-generated voice.

■ MICROPHONES

• HM-12 HAND MICROPHONE

• HM-14 DTMF HAND MICROPHONE

• SM-20 DESKTOP MICROPHONE

■ EXTERNAL SPEAKERS

• IC-SP5 EXTERNAL SPEAKER (8 Ω/4 W)

• SP-7 EXTERNAL SPEAKER (8 Ω/5 W)

• SP-20 EXTERNAL SPEAKER (8 Ω/5 W)

• SP-21 EXTERNAL SPEAKER (8 Ω/5 W)

■ OTHERS

• CT-17 C-V LEVEL CONVERTER

• IC-MB3 MOBILE MOUNTING BRACKET

• MB-23 CARRYING HANDLE



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